

CLAIMS:

1. A local area network operating in the asynchronous transfer mode (ATM) for transmitting cells, which includes a plurality of network interfaces (1 to 8) coupled to a ring via ring connections (29 to 32), the network interfaces including each a switch (24), characterized in that at least one network interface (1 to 8) comprises a radio device (33) for exchanging data with at least one terminal (9 to 21) located in the radio coverage area of the network interface (1 to 8), and in that the switch (24) is provided for transporting the cells at least between ring connections (29 to 32) and the radio device (33).

2. A local area network as claimed in Claim 1, characterized in that the switch (24) includes a receive circuit (47) assigned to a receive connection (39), in that each receive circuit (47) is used for evaluating the header field of a received cell and in that on the basis of the information derived from the header field at least one receive circuit (47) is used for extracting a switch mode from the assigned path memory (44).

3. A local area network as claimed in Claim 2, characterized in that the path memory (44) which is coupled to the receive connection (47) coming from the radio device (33), stores

- a first switch mode for a connection at least between two local terminals (9 to 21), in which mode the switch (24) couples the receive and transmit connections (38, 39) connected to the radio device (33),
- a second switch mode for a connection at least between a local and a remote terminal (9 to 21), in which mode the switch (24) couples the receive connection (39) connected to the radio device (33) and one transmit connection (30, 32) connected to a ring,
- a third switch mode for providing a connection between at least two local and at least one remote terminal (9 to 21), in which mode the switch (24) couples the receive connection (39) connected to the radio device (33) to the transmit connection (38) connected to the radio device (33) and to a transmit connection (30, 32) connected to a ring,
- a fourth switch mode for a connection between a local terminal (9 to 21) and the local controller (40), in which mode the switch (24) couples the

receive connection (39) connected to the radio device (33) to the local controller (40),

- a fifth switch mode for a connection between a local terminal (9 to 21) and the local and at least one remote controller (40), in which mode the switch (24) couples the receive connection (39) connected to the radio device (33) to the local controller (40) and a transmit connection (30, 32) connected to a ring, and

- a sixth switch mode for deleting cells which contain non-existing connections.

4. A local area network as claimed in Claim 3, characterized in that for a connection set-up the controller (40) stores the switch mode for a virtual link in at least one path memory (42 to 44).

5. A local area network as claimed in Claim 4, characterized in that the VCI (Virtual Channel Identifier) and VPI (Virtual Path Identifier) contained in the header field of a cell together feature a virtual link and in that the path memory (42 to 44) for storing the type of connection, the type of cell and the switch mode is included in this identifier.

6. A local area network as claimed in one of the Claims 1 to 5, characterized in that a terminal (9 to 21) has, as has a network interface (1 to 8), a radio device (33, 49) including a high-frequency circuit (51), a modem (52) and a protocol device (53), in that the radio device (49) of a terminal exchanges data with the radio device (33) of the assigned network interface, in that a terminal (9, 21) exchanges identification data by a registration channel, MAC signaling data (MAC = Medium Access Control) by a MAC signalization channel and payload information by at least one transport channel, and in that the payload information contains at least part of a cell.

7. A local area network as claimed in one of the Claims 1 to 6, characterized in that a network interface (1) controls the connection set-up and disconnection.

8. A network interface (1 to 8) for an asynchronous transfer mode (ATM) local area network for transmitting cells, which is coupled to a plurality of network interfaces (1 to 8) which include each a switch (24) combined to a ring and coupled via ring connections (29 to 32), characterized in that the network interface (1 to 8) includes a radio device (33) for exchanging data with at least one terminal (9 to 21) located in the radio coverage area of the network interface (1 to 8) and in that the switch (24) transports cells at least between ring connections (29 to 32) and the radio device (33).